IN THE CLAIMS:

Please amend the claims, as follows:

Claim 1 (Currently Amended): Vacuum plasma generator with an output (26, 26') for feeding a plasma discharge for the treatment of workpieces in a vacuum chamber, comprising:

a mains connection (6a) for the junction to an AC voltage mains,

a mains rectifier (6) connected to a converter (7) with a control input (7a) for the setting and / or regulation of the converter output voltage, and

a controlled full bridge circuit (13) connected to the converter output (7) with a potential-free generator output (26, 26'), which transposes the converter output voltage into pulses of 1 to 500 kHz, and, into the bridge (13) a potential-isolating transformer (14) is switched for the galvanic decoupling of the generator output (26, 26').

Claim 2 (Original): Generator as claimed in claim 1 characterized in that the voltage transformation ratio of the bridge circuit (13) with transformer (14) is maximally 1:2, preferably maximally 1:1.5.

Claim 3 (Currently Amended): Generator as claimed in ~~one of claims 1 or 2~~ claim 1, characterized in that the transformer (14) has a leakage inductance (16, 17) below 50 µH, preferably below 10 µH.

Claim 4 (Currently Amended): Generator as claimed in ~~one of the preceding claims~~ claim 1, characterized in that the converter (7) is a clocked converter, preferably a buck-boost converter for setting an output voltage, which is lower as well as also higher than the input voltage.

Claim 5 (Currently Amended): Generator as claimed in ~~one of the preceding claims~~ claim 1, characterized in that the bridge circuit (13) generates bipolar pulses.

Claim 6 (Currently Amended): Generator as claimed in ~~one of the preceding claims~~ claim 1, characterized in that the bridge circuit (13) comprises control means for the optional setting and/or regulation of the pulse behavior, such as the switching frequency, the duty factor, the pulse width and for setting the pulse curve form.

Claim 7 (Currently Amended): Generator as claimed in ~~one of the preceding claims~~ claim 1, characterized in that the bridge circuit (13) develops a pulse interspace between successive pulses.

Claim 8 (Original): Generator as claimed in claim 7, characterized in that the bridge circuit (13) short circuits the transformer (14) at the primary side during the pulse interspaces.

Claim 9 (Currently Amended): Generator as claimed in ~~one of the preceding claims~~ claim 1, characterized in that at least two bridge circuits (13) are connected succeeding the converter (7).

Claim 10 (Original): Generator as claimed in claim 9, characterized in that four bridge circuits are connected succeeding the converter (7).

Claim 11 (Currently Amended): Generator as claimed in ~~one of claims 9 or 10~~ claim 9, characterized in that to each bridge circuit (13) a transformer (14) is assigned and the secondary sides of the transformers (14) are connected in parallel.

Claim 12 (Currently Amended): Generator as claimed in ~~one of claims 9 to 11~~ claim 9, characterized in that the bridge circuits (13) are switched offset in phase.

Claim 13 (Currently Amended): Method for the production of a layer by reactive deposition out of a plasma, characterized in that the plasma is operated with a vacuum plasma current supply as claimed in ~~one of claims 1 to 12~~ claim 1.

Claim 14 (Original): Method as claimed in claim 13, characterized in that the generator output (26, 26') is connected with two deposition electrodes (3).

Claim 15 (Currently Amended): Method as claimed in ~~one of claims 13 or 14~~ claim 13, characterized in that dielectric layers are deposited reactively.

Claim 16 (Currently Amended): Method as claimed in ~~one of claims 13 to 15~~ claim 13, characterized in that the layer is deposited by sputtering, in particular magnetron sputtering.

Claim 17 (Currently Amended): Method as claimed in ~~one of claims 13 to 16~~ claim 13, characterized in that the layer is a hard material layer, in particular a reactively deposited metal oxide layer Me_xO_y.

Claim 18 (Original): Method as claimed in claim 17, characterized in that the hard material layer is an Al_2O_3 layer.

Claim 19 (Currently Amended): Method as claimed in claim 17 ~~or 18~~, characterized in that the hard material layer is a mixed oxide, such as $(AlMe)_xO_y$, preferably $(AlCr)_xO_y$ and/or $(AlFe)_xO_y$.

Claim 20 (Currently Amended): Method as claimed in ~~one of claims 13 to 19~~ claim 13, characterized in that the crystalline structure of the layer comprises substantially an alpha phase and/or a gamma phase, the gamma phase being preferred.